

# Computers are creating an automotive wonderland

As jaded as I have become about the marvels of computers, I was more or less flabbergasted a few months ago when I was invited to look at a new computer system bought by a guy whose interest was in designing a better wheel.

What startled me was recognizing the system as being pretty much the same as one developed about eight years ago from scratch to win back the America's Cup. That first system set back Chrysler, among others, \$10 million in paid and donated research to develop, and here it was, sitting on the guy's dining room table, at a retail price of about \$7,000.

OK, so it's just another story about how cheap these things are getting. But it also illustrates how quickly an

extremely sophisticated design process today can end up in the hands of about anybody who takes an interest in it. If you are wondering about cars, a month or so ago I talked to a hobbyist-engineer type who already is saving to buy a similar system to design his own sports car. He has to buy new drapes for his wife first, though.

Both computer systems are derivatives of something called computer-aided design (CAD), which has had a profound effect on how cars are designed in the past several decades.

Essentially, CAD systems store all the elements of information needed to design a component, or even an entire automobile, in a data base that feeds individual terminals. A



auto talk  
**Dan McCosh**

designer sits at a terminal, and can actually sketch out a drawing on his screen. Then, the dimensions and even the physical characteristics of what has been drawn come to life, and the computer can actually carve a full-scale model, or even a set of production molds, using the picture on the screen.

More and more, the data and computer systems operated by the

world's auto companies are becoming the essence of what a car is all about. The data bases store everything, from new designs to repair parts. They interact on a worldwide scale, so that a designer in Germany can quickly tap into the thoughts of a guy in D-arbon.

In a curious way, the reliance on these data bases to produce cars is

changing the role of the corporations themselves. The huge pool of capital formerly represented by the investment in machine tools and stamping presses is being supplanted by the experience stored in these computers.

A few days ago, Ford put on a truly amazing demonstration of what these systems are capable of today. A few sketches from an artist quickly was transformed into a three-dimensional computer image that then could actually be crashed onto the tube. You could even watch the airbag deploy.

It was, of course, a multi-billion dollar effort that took years to develop. Ford is in a race with all the other major auto companies in in-

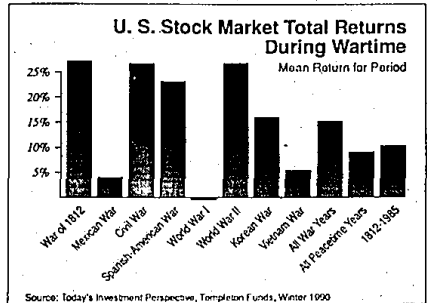
creasing its use of these systems to speed products to market. Ultimately, by the winner is the one that will dominate the world auto business.

Then I remembered the guy at his kitchen table. I figure it's about three years before some other guy, maybe in his living room, will be able to duplicate what Ford is doing today with computer design. The intellectual equivalent of having your own assembly line in your garage.

I truly don't know where all this is headed.

Dan McCosh is automotive editor for Popular Science magazine.

# Wartime is NOT the time to stay out of stock market



One of the greatest fears Americans have relates to the ramifications of fighting the war in the Gulf region.

Even by conservative estimates, the war is going to cost in excess of \$60 billion, not counting the cost of humanitarian aid given to various countries and rebuilding the economies affected by the war.

Such a large expenditure in one year could ruin the U.S. economy and play havoc in the investment world.

There is nothing new in this line of thinking. The market reacts negatively to all wars and other types of crises. Consequently, most investors believe that it's better to liquidate all investments and sit tight on liquid cash until the economy has recovered from the war blues.

finances and you  
**Sid Mittra**

While the above argument appears logical and therefore the conclusion seems reasonable, the historical data does not support the argument.

The accompanying chart, which goes all the way back to the War of 1812, demonstrated that wars, and crises brought on by wars, caused share profits to rise after the initial surprise and fear.

So my advice to you is to use a cautious but positive strategy to play the stock market.

Seminar: How to Use Everything from Mutual Funds and Annuities to Insurance Policies and CDs. The seminar will run 7-9:30 p.m. Tuesday, May 14, in the offices of Coor-

noted Financial Planning at 3250 W. Big Beaver, Suite 640, Troy. Reservations required, telephone 643-8888.

Sid Mittra is a professor of finance, school of business at Oakland University and owner of Coordinated Financial Planning.

## marketplace

The electrical division of Gavin Design Limited in Sylvan Lake is doing custom cathodic work at St. Hugo of the Hills Catholic church, Bloomfield Hills.

Grace & Wild Studios in Farmington Hills is using a DF/X Compositum for video graphics.

Eric S. Canavser of Farmington Hills, a certified public accountant, opened his practice at 6960 Orchard Lake Road, Suite 204, West Bloomfield 48322.

The Society of Plastics Engineers, 35,000-member international society has named Ray D. Elsbrenner & Co. of Troy to provide public relations counsel.

Hall Industrial Publicity Inc. of Troy and its subsidiary HIP Advertising Service was appointed public relations and advertising agency for Inter-Lakes Bases Inc. in Fraser.

Brava, a contemporary women's high fashion shop, opened in downtown Birmingham. The store is at 167 Woodward, three doors north of Maple.

The creative efforts of Kane and Kane Inc. of Birmingham were recognized when television, radio and print ads it produced for Island of Bobbi received top 1990 Brass Ring awards.

Cantfield Powers & Associates Inc. was named advertising and public relations agency for Sir Lawrence's Food Co.

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